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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/417,979	10/13/1999	LINUS TORVALDS	TRANS22	8219

7590 11/03/2003

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EXAMINER
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ELLIS, RICHARD L

ART UNIT	PAPER NUMBER
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2183

DATE MAILED: 11/03/2003

7

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/417,979

Applicant(s)

TORVALDS ET AL.

Examiner

Richard Ellis

Art Unit

2183

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 15 August 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-16 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413) Paper No(s) \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

1. Claims 1-15 remain for examination. Claim 16 is newly presented for examination.

2. It is noted that applicant's amendment has failed to comply with the provisions of MPEP 714.04, 714.02, and 37 CFR 1.111. MPEP 714.02 states:

"The requirements of 37 CFR 1.111(b) must be complied with by pointing out the specific distinctions believed to render the claims patentable over the references in presenting arguments in support of new claims and amendments."

37 CFR 1.111(b) states:

"... The reply must present arguments pointing out the specific distinctions believed to render the claims, including any newly presented claims, patentable over any applied references. ... A general allegation that the claims define a patentable invention without specifically pointing out how the language of the claims patentable distinguishes them from the references does not comply with the requirements of this section."

Applicant's reply has failed to "point out the specific distinctions believed to render [new claim 16] patentable over the references" and has instead made a general allegation that new claim 16 defines a patentable invention. As stated by MPEP 714.04, such a "claim should *not* be allowed". However, MPEP 714.04 also states: "However, if the claims as amended are clearly open to rejection on grounds of record, a final rejection should generally be made." As the claims are clearly open to rejection on grounds of record, a final rejection is being made rather than holding applicant's amendment to be non-responsive.

3. The text of those sections of Title 35, US Code not included in this action can be found in a prior Office Action.

4. Claims 1-15 are rejected under 35 USC 102(e) as being clearly anticipated by Lethin et al., U.S. Patent Application Publication 2002/0,147,969.

Lethin et al. was cited as a prior art reference in paper number 5, mailed May 13, 2003.

5. The rejections are respectfully maintained and incorporated by reference as set forth in the last office action, paper number 5, mailed May 13, 2003.

6. New claim 16 is rejected under 35 USC 102(e) as being clearly anticipated by Lethin et al.

7. As to claim 16, it does not teach or define above the invention claimed in claims 1-15

and are therefore rejected under Lethin et al. for the same reasons set fourth in the rejection of claims 1-15, supra.

8. Applicant's arguments filed August 15, 2003, paper number 6, have been fully considered but they are not deemed to be persuasive.

9. In the remarks, applicant argues in substance:

9.1. That: "Claim 1 recites the limitation of 'increasing a count if the interpreter is operating and decreasing the count if the translator is operating.' Thus, Claim 1 recites updating a counter based on whether the interpreter is operating or the translator is operating. ... Lethin fails to disclose this limitation. ... Applicant's note that Lethin does not increase a count if the interpreter is operating, as claimed. In fact, as the mechanism in Lethin depends on requests to the compiler and outputs from the compiler, it does not measure interpreter utilization.

This is not found persuasive because applicant's appear to have mis-understood the application of the Lethin et al. reference to their claimed invention. Applicant's argue that Lethin does not increase a count if the interpreter is operating, this argument is false. As seen in figure 28, translation requests are produced by the interpreter, therefore, in order to produce a translation request, the interpreter must have been operating. Furthermore, as seen in figure 29 and paragraph 624, completions indicate that the compiler has completed a translation, therefore, in order to produce completions, the compiler must have been operating. As detailed in paragraph 628, the system contains a "threshold value" which is incremented or decremented (i.e., counted) based upon the difference between the number of translation requests and the number of completions. Therefore, because there is a signal that indicates that the interpreter is running (translation requests) and a signal indicating that the compiler is running (completions), and because these two signals are utilized to increment or decrement a counter (threshold value), the second and third clauses of claim 1 (for example) has been met by the reference. Finally, as detailed at paragraphs 623-629, the purpose of the "threshold value" is to control how often the compiler is running vs. how often the interpreter is running. By adjusting the "threshold value" the system controls switching between interpreting and compiling of code. When the "threshold value" is high, it prevents switching to the compiler (paragraph 628) and when the "threshold value" is low, it allows switching to the compiler

very often (paragraph 628). Accordingly, the final clause of claim 1 is also met by the reference.

- 9.2. That: "Claim 1 further recites the limitation of, 'changing from interpreting to translating a sequence of target instructions when the count reaches a selected maximum.'"

This is not found persuasive because as seen from the explanation supra., the "threshold value" controls changing from interpreting to compiling of code within the system. When the "threshold value" approaches it's selected maximum low value, more compiling will be performed, meaning that the system will switch from interpreting to compiling.

- 9.3. That: "Changing the threshold does not change from interpreting to translating a sequence of target instructions."

This is not found persuasive because as seen from paragraph 628, a particular value of the threshold value will prevent translation requests, effectively halting all compiling and running the interpreter alone. While a different particular value of the threshold value will allow more compiling to occur. Therefore, the threshold value does indeed control changing from interpreting to compiling.

- 9.4. That: "The rejection [of claim 10] cites element 144, the block picker, as a means of determining dynamically which conversion process best converts each sequence of instructions. Applicant's respectively submit that the block picker 114 is used to choose a segment of the code to compile, creates a control flow graph (CFG) that describes the original instructions to compile, and passes the CFG to the block layout unit. However, the block picker 114 does not determine which conversion process should be used."

This is not found persuasive because as seen from paragraphs 0066, the block picker 144 is responsible for choosing which segments of original code to compile based upon seed and branch profile information. Accordingly, the block picker has indeed determined by choosing a segment of code that the segment is best compiled and has determined to use the compile conversion process upon that block of code. Therefore, to the extent claimed in the broad language of the claims, the block picker 144 is indeed performing the claimed function.

10. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR § 1.136(a). The practice of automatically extending the

shortened statutory period an additional month upon the filing of a timely first response to a final rejection has been discontinued by the Office. See 1021 TMOG 35.


A SHORTENED STATUTORY PERIOD FOR RESPONSE TO THIS FINAL ACTION IS SET TO EXPIRE THREE MONTHS FROM THE DATE OF THIS ACTION. IN THE EVENT A FIRST RESPONSE IS FILED WITHIN TWO MONTHS OF THE MAILING DATE OF THIS FINAL ACTION AND THE ADVISORY ACTION IS NOT MAILED UNTIL AFTER THE END OF THE THREE-MONTH SHORTENED STATUTORY PERIOD, THEN THE SHORTENED STATUTORY PERIOD WILL EXPIRE ON THE DATE THE ADVISORY ACTION IS MAILED, AND ANY EXTENSION FEE PURSUANT TO 37 CFR § 1.136(a) WILL BE CALCULATED FROM THE MAILING DATE OF THE ADVISORY ACTION. IN NO EVENT WILL THE STATUTORY PERIOD FOR RESPONSE EXPIRE LATER THAN SIX MONTHS FROM THE DATE OF THIS FINAL ACTION.

11. Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Richard Ellis whose telephone number is (703) 305-9690. The Examiner can normally be reached on Monday through Thursday from 7am to 5pm.

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, Eddie Chan, can be reached on (703) 305-9712. The fax phone number for the USPTO is: (703)872-9306.

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 305-3900.

Richard Ellis  
October 30, 2003

  
RICHARD L. ELLIS  
PRIMARY EXAMINER